

Table 11: **Rev**

| HXB2 Location | Author Location   | Sequence                  | Immunogen       | Species(HLA)              | References      |
|---------------|---|---------------------------|-----------------|---------------------------|-----------------|
| Rev(9–23)     | Rev(9–23 HXB2)<br>• One of four peptides that stimulates in PBLs from HIV-1+ donors both CD4+ Th cell proliferation and CTL to autologous targets incubated with peptide  | DEELIRTVRLIKLLY           | HIV-1 infection | human( )                  | [Blazevic1995a] |
| Rev(16–35)    | Rev(16–35 LAI)<br><br><b>Vaccine:</b> <i>Vector/type:</i> DNA <i>Strain:</i> LAI <i>HIV component:</i> Nef, Tat, Rev<br>• Stronger, broader responses were observed in animals vaccinated with DNA epidermally rather than with intramuscular protein<br>• Some proliferative response to vaccination was observed to peptides throughout Nef and Tat, less for Rev | VRLIKFLYQSNPPPNPE-<br>GTR | Vaccine         | murine(H-2 <sup>d</sup> ) | [Hinkula1997]   |
| Rev(25–39)    | Rev(25–39 HXB2)<br>• One of four peptides that stimulates in PBLs from HIV-1+ donors both CD4+ Th cell proliferation and CTL to autologous targets incubated with peptide   | SNPPPNPEGTRQARR           | HIV-1 infection | human( )                  | [Blazevic1995a] |
| Rev(31–50)    | Rev(31–50 LAI)<br><br><b>Vaccine:</b> <i>Vector/type:</i> DNA <i>Strain:</i> LAI <i>HIV component:</i> Nef, Tat, Rev<br>• Stronger, broader responses were observed in animals vaccinated with DNA epidermally rather than with intramuscular protein<br>• Some proliferative response to vaccination was observed to peptides throughout Nef and Tat, less for Rev | PEGTRQARRNRRRRW-<br>RERQR | Vaccine         | murine(H-2 <sup>d</sup> ) | [Hinkula1997]   |
| Rev(33–48)    | Rev(33–48 HXB2)<br>• One of four peptides that stimulates in PBLs from HIV-1+ donors both CD4+ Th cell proliferation and CTL to autologous targets incubated with peptide   | GTRQARRNRRRRWRE-<br>R     | HIV-1 infection | human( )                  | [Blazevic1995a] |
| Rev(41–56)    | Rev(41–56 HXB2)<br>• One of four peptides that stimulates in PBLs from HIV-1+ donors both CD4+ Th cell proliferation and CTL to autologous targets incubated with peptide   | RRRRWRERQRQIHSIS          | HIV-1 infection | human( )                  | [Blazevic1995a] |
| Rev(76–95)    | Rev(76–95 LAI)<br><br><b>Vaccine:</b> <i>Vector/type:</i> DNA <i>Strain:</i> LAI <i>HIV component:</i> Nef, Tat, Rev<br>• Stronger, broader responses were observed in animals vaccinated with DNA epidermally rather than with intramuscular protein<br>• Some proliferative response to vaccination was observed to peptides throughout Nef and Tat, less for Rev | PPLERLTLCNEDCGT-<br>SGTQ  | Vaccine         | murine(H-2 <sup>b</sup> ) | [Hinkula1997]   |

## HIV Helper-T Cell Epitopes

|  |                 |                            |                          |                           |                 |
|--|-----------------|----------------------------|--------------------------|---------------------------|-----------------|
| Rev(96–116)  | Rev(96–116 LAI) | GVGSPQILVESPTVLES-<br>GTKE | Vaccine                  | murine(H-2 <sup>d</sup> ) | [Hinkula1997]   |
| <p><b>Vaccine:</b> <i>Vector/type:</i> DNA    <i>Strain:</i> LAI    <i>HIV component:</i> Nef, Tat, Rev</p> <ul style="list-style-type: none"> <li>• Stronger, broader responses were observed in animals vaccinated with DNA epidermally rather than with intramuscular protein</li> <li>• Some proliferative response to vaccination was observed to peptides throughout Nef and Tat, less for Rev</li> </ul>  |                 |                            |                          |                           |                 |
| Rev( )   | Rev( )          |                            | Vaccine                  | murine( )                 | [Chan1998]      |
| <p><b>Vaccine:</b> <i>Vector/type:</i> DNA    <i>HIV component:</i> Rev</p> <ul style="list-style-type: none"> <li>• Rev M10 is a construct that was introduced into mice through a genetic vaccination</li> <li>• Rev was used to test for down-regulation of HIV-1 in infected cells as a method for gene therapy – in the course of this study, Rev-specific IL-2 producing Th cells developed in the mice</li> </ul>   |                 |                            |                          |                           |                 |
| Rev( )   | Rev( )          |                            | Vaccine                  | human( )                  | [Calarota1999a] |
| <p><b>Vaccine:</b> <i>Vector/type:</i> DNA    <i>HIV component:</i> Nef, Rev Tat</p> <ul style="list-style-type: none"> <li>• Nine HIV-1+ subjects were given one of three DNA vaccinations for nef, rev or tat, and novel proliferative and CTL responses were generated</li> <li>• The nef DNA immunization induced the highest and most consistent CTLp activity, IFN-<math>\gamma</math> production, and IL-6 and IgG responses</li> <li>• Highly active antiretroviral treatment (HAART) did not induce new HIV-specific CTL responses but reduced viral load, while DNA vaccination induced new immune responses but did not reduce viral load – thus this is a potentially complementary and promising combination</li> </ul> |                 |                            |                          |                           |                 |
| Rev( )   | Rev( )          |                            | HIV-1 infection, Vaccine | human( )                  | [Calarota2001]  |
| <p><b>Vaccine:</b> <i>Vector/type:</i> DNA    <i>HIV component:</i> Nef, Rev, Tat    <i>Stimulatory Agents:</i> CpG motifs</p> <ul style="list-style-type: none"> <li>• This review discusses the cellular immune response, and comments on CpG induction of Th1 cytokines and enhanced immune responses, and HIV-1 DNA vaccine boosting of CTL and Th proliferative responses in asymptomatic HIV+ individuals</li> </ul>   |                 |                            |                          |                           |                 |